UNIVERSITY OF CALIFORNIA
COLLEGE OF AGRICULTURE
AGRICULTURAL EXPERIMENT STATION
BERKELEY, CALIFORNIA

A TWO-ROOM BATHHOUSE FOR MEN AND WOMEN

L. W. NEUBAUER[1] AND H. L. BELTON[2]

This plan is one of a series of labor-camp structures prepared to aid farmers in the selection of suitable farm-labor housing during the war emergency, and at the same time to provide a semipermanent structure. It is simple in design, provides adequate floor space, and is well lighted and ventilated. When properly arranged in a camp group, it presents a neat appearance; moreover, it provides a structure which meets the requirements of the State Labor Housing and Sanitation Act.

Restrictions on Materials

Farmers contemplating construction should familiarize themselves with available local materials and should consult with county war boards and other Federal agencies to make certain they are conforming with regulations regarding the use of any critical materials involved. In some cases, the use of substitute materials may be necessary.

Size and Arrangement

The illustrations show a bathhouse, 16 × 24 feet in size, which provides accommodations for both men and women.

The floor plan is divided into two equal areas, and shows laundry trays and three showers for each section. More may be added by placing the laundry trays at the end walls, relocating two windows, and moving the heater nearer the entrance door. One shower head for each fifteen persons is required.

Floor

A sanitary floor is required; a curbed concrete slab properly sloped for drainage is recommended (see floor profile and plan detail C).

A 4-inch concrete slab, consisting of a 1–2¾–4 mix, and laid on a gravel fill to elevate the finished floor about 8 inches above grade is recommended. The concrete should be well tamped into place and the surface edged true and given a smooth finish. Curing for several days with a layer of wet sand or straw is advisable.

Bolts, ½ × 8 inches in size, and spaced at about 4-foot centers, should be imbedded in the concrete curb to anchor the wall sills.

Framing

The framing for walls and roof is 2 × 4 inch stock, with the studding and rafters placed on 2-foot centers. Bracing and bridging in the walls and ties, 4 feet apart across the ceiling line (plan detail D), with a 1 × 6 inch vertical stay from ridge to tie, should all be included to provide rigid framing.

Wall Exteriors

The wall exteriors may be sheathed with one of the several styles of stock siding laid horizontally, or with 1 × 12 inch boards and battens placed vertically. Only dry material should be used for the exterior siding. Under war conditions very little dry lumber, suitable for siding, is available. Green lumber shrinks to such an extent that it may be necessary to remove and re-lay it after one season of exposure. In order to avoid this situation, it is suggested that the exterior wall surfaces be sheathed horizontally with common 1 × 8 inch stock boards, or a common grade of shiplap. These surfaces may then be covered with a good grade of single-ply roll roofing laid vertically, with the joints and corners stripped with battens or lath. The lower grades of lumber are acceptable for this type of sheathing and such shrinkage as occurs may be corrected as far as tightness is concerned by subsequently surfacing the walls directly over the roll roofing. It is reasonable to assume that dry lumber of the pattern desired will be more readily available at a later date. The thinner less expensive types of siding not generally placed directly on the studded walls are suitable when applied over a tight-sheathed wall of this type.

Roofing

The roof surface should be tight-sheathed, and then may be covered with roofing paper, as is done on the walls. If possible, however, a more permanent type of roofing material such as wood or composition shingles, galvanized iron sheets, or a heavy grade of roll roofing, should be applied.

Windows, Doors, and Screens

The windows are of the four-light, single-sash type; and are 2 feet 6 inches by 3 feet in size. A drop-in sash supported by wood shields, and a sliding type, are shown in plan details A and B. Sash hinged at the bottom to open inward (supported by a chain), or ordinary double-hung windows may also be used. Screens should be installed on all windows. Standard full-panel or panel-and-glass doors may be installed, or home-built doors constructed. The screen doors may be of full-screen, or the panel-and-screen type.

Interior Wall Surfaces

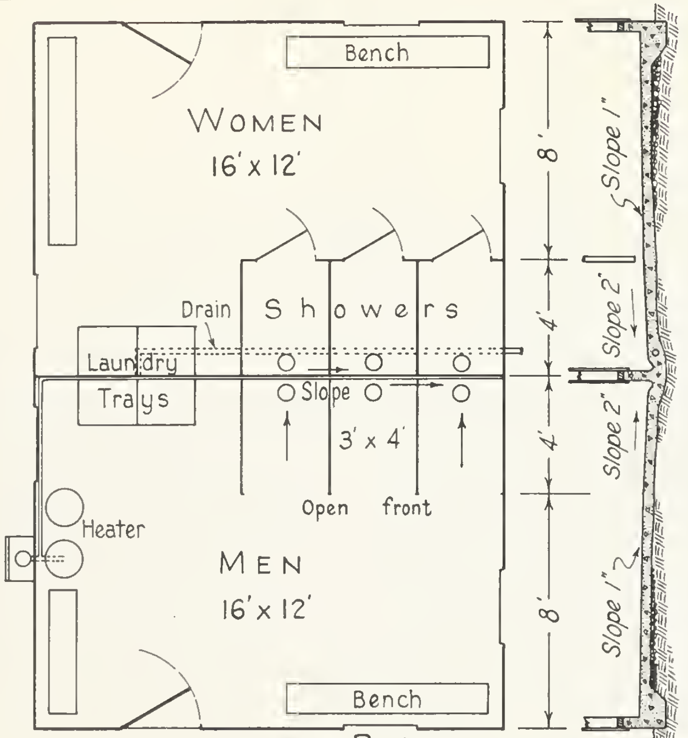
No finish for the wall interiors is suggested at this time. If a more finished structure is desired for post-war use, the interiors may be sheathed with tongue-and-groove lumber, plain boards and battens, or wood or composition panels.

---

[1]Assistant Professor of Agricultural Engineering and Assistant Agricultural Engineer in the Experiment Station.

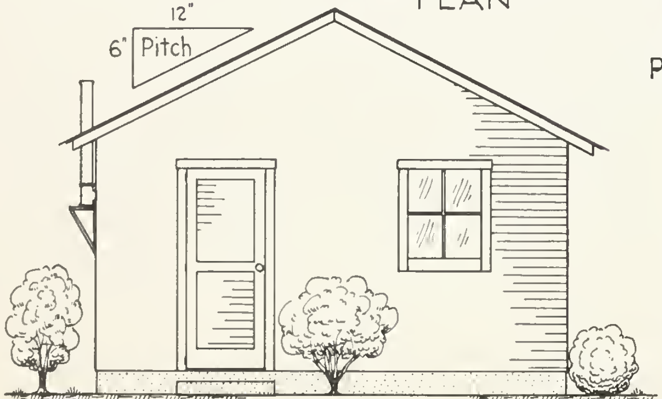
[2]Associate in Agricultural Engineering.

UNIVERSITY OF CALIFORNIA
LIBRARY
COLLEGE OF AGRICULTURE
DAVIS

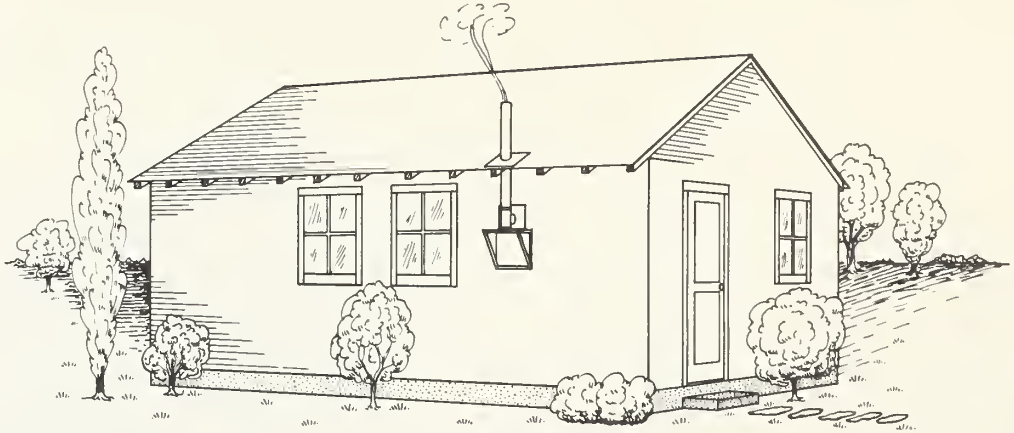


PLAN

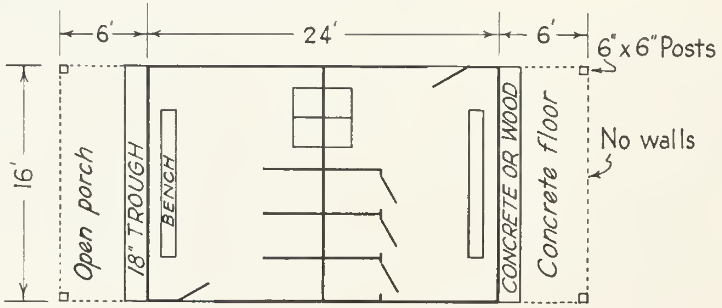
FLOOR PROFILE



ELEVATION



PERSPECTIVE



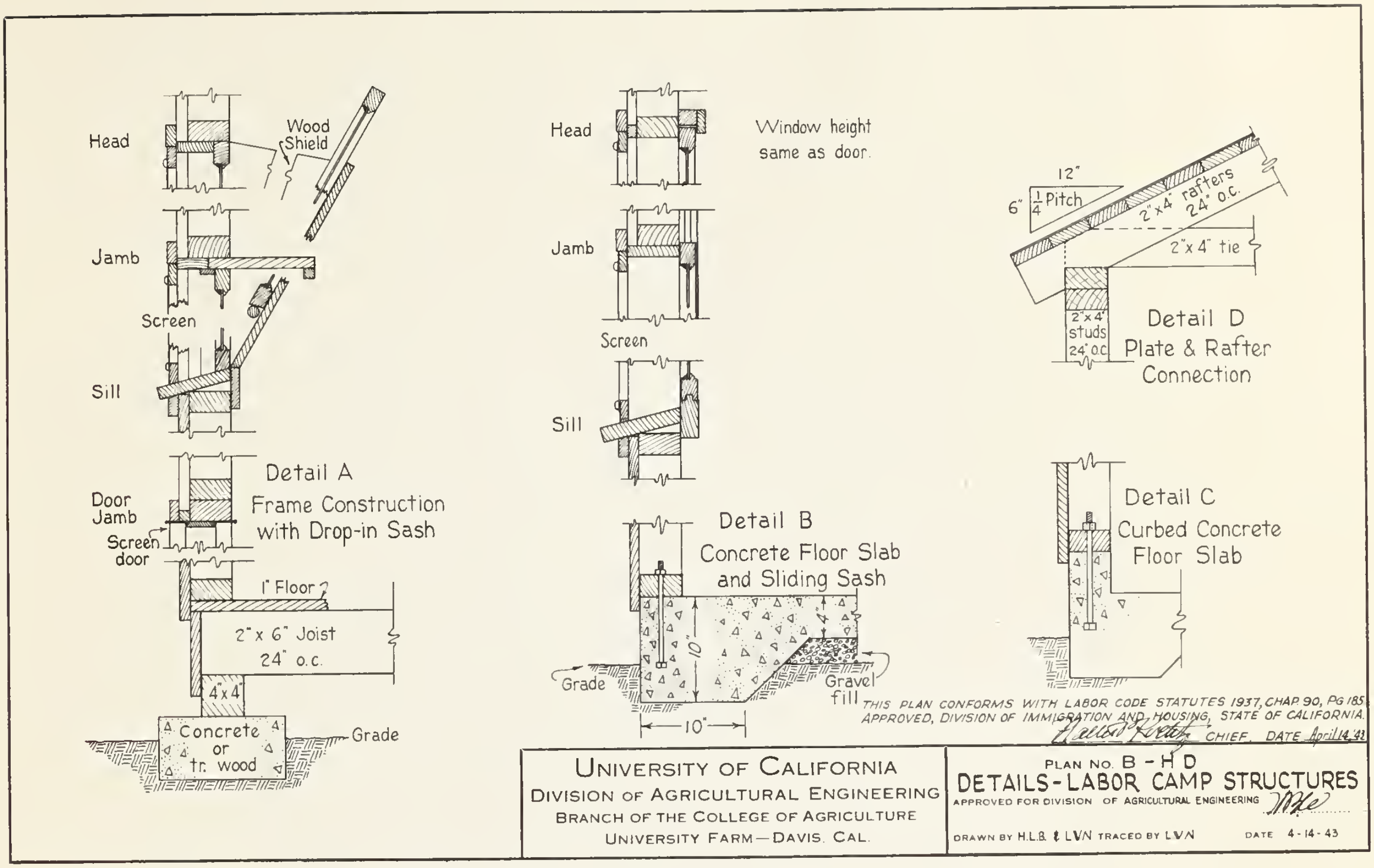
ALTERNATE FLOOR PLAN

Reduced scale

With inside rearrangement
and 6' roof extension on each end, for wash troughs

THIS PLAN CONFORMS WITH LABOR CODE STATUTES 1937, CHAP. 90, PG. 185.
APPROVED, DIVISION OF IMMIGRATION AND HOUSING, STATE OF CALIFORNIA,
[signature] CHIEF DATE: April 14, '43

UNIVERSITY OF CALIFORNIA DIVISION OF AGRICULTURAL ENGINEERING BRANCH OF THE COLLEGE OF AGRICULTURE UNIVERSITY FARM—DAVIS, CAL.	PLAN NO. B-H5 16' x 24' BATH HOUSE FOR MEN & WOMEN APPROVED FOR DIVISION OF AGRICULTURAL ENGINEERING [signature] DRAWN BY H.L.B. & L.W.N. TRACED BY L.W.N. DATE: 4-14-43



A ceiling should not be necessary with tight, smooth-surfaced, roof sheathing.

Shower Partitions

The partition wall should be framed to the roof and sheathed on two sides with 1 × 8 inch shiplap laid horizontally. The shower partitions attached to this wall may be of 2 × 4 inch framing laid flatwise. The front studding is pinned to the concrete floor, the upper end held in position with a cross tie placed at wall-plate height. The entire shower stall should be lined with a waterproof material such as plain or corrugated galvanized iron, plywood, pressed board, or asbestos-cement sheets. The partitions need not be over 6 feet high, with the lower ends 1 foot above the floor.

Chimney

A galvanized-iron chimney of stock design, lined with a 6-inch terra cotta flue, and equipped with metal brackets, cleanout plate, and roof cap, is recommended.

Electric Wiring

Electric wiring shall be exposed wire with knob and tube installation of a type which meets the minimum requirements of the Electrical Safety Orders of the California Industrial Accident Commission. Two ceiling lights controlled by wall switches are listed for each section. A convenience plug located near the wash trays is also included in each room.

Plumbing

All plumbing work is to be in full accordance with local ordinances or the standard code drafted and sponsored by the Pacific Coast Plumbing Inspectors Association. Cement laundry trays and shower heads complete with faucets, valves, fittings, and traps, should be of simple standard design. The floor plan shows a hot-water heater and boiler which may be of optional type, according to the fuel available. Water-supply and disposal lines outside the building are not included in the estimate. A cesspool is recommended for sanitary disposal of waste water.

Painting

Two coats of a good grade of lead-and-oil paint are recommended for all exterior woodwork and shower partitions other than metal. When walls are finished with roofing paper and battens, only the trim requires paint. If rustic or other wood exterior finish is used, it may all be protected with paint.

Bill of Materials

Concrete	35 sacks Portland cement 4 2/3 cu. yd. sand 5¼ cu. yd. gravel (fill not included)	
Sills	4 pcs. 2" × 4"—16' 2 pcs. 2" × 4"—14'	
Plates	12 pcs. 2" × 4"—16'	
Rails and headers	8 pcs. 2" × 4"—16'	
Ties	4 pcs. 2" × 4"—16'	
Braces	10 pcs. 2" × 4"—10'	
Studding	70 pcs. 2" × 4"—8'	
Rafters	26 pcs. 2" × 4"—10'	
Ridgepole	2 pcs. 1" × 6"—12'	
Stays	1 pc. 1" × 6"—14'	
Fascia-gable ends	4 pcs. 2" × 4"—10'	
Wall sheathing	900 bd. ft. 1" × 8" shiplap	(1)
Roll roofing for walls	8 rolls 1-ply roofing	(2)
Battens (or wood lath)	300 lin. ft. 3/8" × 1½" strips	(3)
Roof sheathing	600 bd. ft. 1" × 8" shiplap	
Roofing	5 squares, or 20 bundles of shingles	(4)
Ridge boards	2 pcs. 1" × 4"—12' 2 pcs. 1" × 4"—14'	(5)
Partition sheathing	400 bd. ft. 1" × 8" shiplap	
Shower partitions	15 pcs. 2" × 4" 8'	
Shower sheathing	200 sq. ft. 4' × 5' waterproof panels (no allowance for waste) 168 sq. ft. 4' × 6' waterproof panels (see discussion under "Shower Partitions")	
Shower doors (boards and cleats)	10 pcs. 1" × 8"—10' shiplap	
Shower door jambs	4 pcs. 2" × 4"—5'	
Windows	6 only, 2'6" × 3'0" × 1½", 4-lt. sash, glazed; sill and trim as per detail	
Screens	6 window screens for above windows, screen size and trim dependent on detail used	
Doors	2 only, 2'8" × 6'8" × 1½" stock panel doors 2 only, 2'8" × 6'8" × 1 1/8" panel-and-screen doors; trim and stops as per detail	
Nails and hardware	42 lbs. 8d common wire nails 14 lbs. 20d common wire nails 20 lbs. 3d galv. nails for shingles (6) 2 lbs. 3d common wire nails for battens (7) 1 lb. each, 6d and 8d finishing nails for trim 20 only, ½" × 8" carriage bolts for sills 6 only 3/8" × 7" carriage bolts for shower door jambs 2 prs. 3" × 3" loose-pin butts 2 common rim locks 2 prs. screen-door spring hinges 2 screen-door pulls and catches 6 sash catches for windows 6 prs. window-screen hangers 6 only, 2" hooks and eyes	
Paint	3 qts. paint, color as desired, for trim	
Electric wiring	170 ft. no. 14 insulated copper wire, with porcelain knobs (40) and tubes (30) 1 only, 30-amp. fused utility switch 2 only, 15-amp. fuses 4 porcelain screw receptacles 2 single-pole switches, with boxes and covers 2 duplex receptacles, with boxes and covers 10 ft. nonmetallic loom	
Plumbing	2 only, two-compartment cement laundry trays 2 sets mixing faucets and cast-iron wall trap assemblies 6 utility showers with mixing valves and fittings (Heater and boiler not estimated) 70 ft. of ½" galv. iron pipe with fittings 14 ft. of 2" galv. iron pipe for laundry drain, with fittings	

Rough Summary of Materials

2,050 bd. ft. lumber less than 2" thick
1,050 bd. ft. lumber, 2" and thicker
80 lbs. nails

Electric equipment, including 2.2 lbs. (net) copper wire	$10.00
Hardware	5.00
Portland cement	24.00
Plumbing	65.00
Waterproof shower partitions	$30.00

Cost

The approximate cost of this bathhouse complete, including labor, will be about $725 according to the price range of materials and labor.

Alternate Construction

If rustic siding is desired in place of shiplap and paper, deduct items 1, 2, 3 and 7 from materials list, and add:

900 bd. ft. 1" stock rustic, pattern as desired
2½ gal. paint
½ gal. linseed oil
1 qt. turpentine

If roll roofing is desired, deduct items 4, 5, and 6 from materials list, and add:

5 rolls 3-ply roofing paper

Summary

If alternate construction is used, the critical materials listed as additions to, or deductions from, the original list should be corrected in the rough summary of materials.

5m-6,'43(6743b)